



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,400	03/31/2004	Benjamin N. Eldridge	P71C2-US	7966
50905	7590	12/01/2008		
N. KENNETH BURRASTON KIRTON & MCCONKIE P.O. BOX 45120 SALT LAKE CITY, UT 84145-0120			EXAMINER KARLSEN, ERNEST F	
			ART UNIT 2829	PAPER NUMBER
			NOTIFICATION DATE 12/01/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ecowles@kmclaw.com
kburraston@kmclaw.com
patents@formfactor.com

Office Action Summary	Application No. 10/815,400	Applicant(s) ELDRIDGE ET AL.	
	Examiner ERNEST F. KARLSEN	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-49,53-55,60-63,67 and 70-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-49,53-55,60-63,67 and 70-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 47-49, 53-55, 60-63, 67 and 70-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what the structural result would be for the semiconductor die that is tested by any of the claims. No structural features are disclosed in the specification and no structural features are presented by the claims. What structural effects would result from the process steps of claims 60-63, 67 and 70-78 is not clear. How such would lead to a functional change is not clear. The limitations of claims 47-49 and 53-55 seem to be yet further away from having any influence on a functional change. What influence does the material composition of the blade have on the structure produced. No description of what the structure would look like for any of the claims is presented in the disclosure. It is still not clear what the structural result would be for the semiconductor die that is tested by the process of any of the claims. Any structural result appears to be akin to placement of an identifying mark which appears to be a kind of printing. Thus what Applicants are claiming is an old device with some kind of printing thereon. Again no illustration of the structure is present in the specification or drawings so it is not clear what the product would be. It is not clear what is meant by "cutting edge" and "slice mark".

Claims 47-49, 53-55, 60-63, 67 and 70-78 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

Art Unit: 2829

application was filed, had possession of the claimed invention. It is not clear what is meant by “cutting edge” or “slice mark”. The quoted terms do not appear in the original disclosure and are considered new matter. There is no original disclosure that blades are “pressed” against pads. It is not clear what “pressed” means.

Claims 47-49, 53-55, 60-63, 67 and 70-78 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not clear how Applicants' blade can “slice”, “slice cleanly”, “cut” or “cut cleanly”. Such terms appear in the abstract and pages 5, 10 and 11 of the specification. Aluminum oxide is a ceramic material and has a crystalline structure. The Examiner is not aware that a brick of aluminum oxide can be sliced or cut with a knife. A knife could no doubt be used to saw through an aluminum oxide layer because a real world knife edge is rough. Such sawing would leave a pile of aluminum oxide dust and presumably the cut or slice could not be considered “cleanly”. Any cut through a sheet of aluminum oxide will leave dust or chunks. Some non-crystalline materials such as plastic or butter seem to slice reasonably cleanly. It is not clear from Applicants' disclosure how aluminum oxide can be “sliced cleanly” or “cut cleanly”. Applicants' make argument, in previous responses to office actions that, in effect, say that “sliced” means “sliced cleanly” and not “break”, “smash”, “split”, “divided into parts violently” or “reduce to pieces or fragments”. Given such meaning to “sliced” it is not clear from Applicants' disclosure how “sliced” can be accomplished without “break”,

Art Unit: 2829

“smash”, “split”, divided into parts violently’ or “reduce to pieces or fragments”. The Examiner does not understand how anything can be sliced cleanly.

The Examiner and Applicants are locked in a “no it isn’t”, “yes it is” type of argument and maybe neither are very accurate. The Examiner has no facility for high magnification viewing of a pad as claimed by Applicants. Results of a viewing of a pad using a microscope at 600 power after the pad has been tested, without cleaning, by the disclosed method by Applicants with the results presented in a 37 CFR 1.132 affidavit should advance understanding. Pictures for the record would be desirable. It is further noted that the product as currently claimed was not considered part of the invention at the time of filing and no drawings or significant discussion of the semiconductor product was originally present.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the semiconductor product must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

Art Unit: 2829

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 47, 49, 60-63, 67, 70, 72-75 and 78 are rejected under 35 U.S.C. 102(e) as being anticipated by Kennedy. With regard to claims 47, 49, 60-63, 67, 70, 72-75 and 78, Kennedy shows, in Figure 6, a chip 13 with pads "pressed" against a probe in the form of a blade 71, see column 7, lines 63-67. The blade 71 inherently has a "cutting edge" along the part of the blade 71 that contacts the pad. Because the blade 71 is at the end of a cantilever arm 37a it will inherently deflect across the terminal. The blade 71 as shown in Figures 5-8 of Kennedy will inherently deflect in a motion that is

Art Unit: 2829

approximately parallel to the length of the blade which is within plus or minus 45 degrees. The "cutting edge" of the blade inherently has to penetrate the surface to make contact.

Applicants have argued in their response that the blade of Kennedy has only vertical motion with no lateral motion. The free end of a cantilevered beam will always move in an arc when deflected. Thus the blade of Kennedy will inherently deflect across the terminals when the free end of the cantilevered beam of Kennedy moves relative to the end that does not move. The deflection will be parallel to the axis and thus within all angular ranges claimed. The blade of Kennedy will inherently have a slope adjacent its contact edge.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 48, 53-55, 71, 76 and 77 rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy. With regard to claim 48 there is no disclosure of criticality that the interconnection be a buckling beam element. With regard to claims 53-55, 71, 76 and 77, there is no disclosure of criticality of the composition or shape of the interconnection element or the tip. Because of no indication of criticality such features are considered obvious.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wark et al and Gleason et al are cited to show additional apparatus similar to that of Kennedy.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest F. Karlsen whose telephone number is 571-272-1961. The examiner can normally be reached on 8 hrs. Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ernest F. Karlsen/
Primary Examiner, Art Unit 2829

Application/Control Number: 10/815,400
Art Unit: 2829

Page 8